

5 We claim:

1. A method for selecting a proximate frame of web page having a plurality of frames knowing a first position within a frame, each frame having a location relative to a web browser window, the method:

10 determining the location within the web browser window of each frame;  
receiving a directional command from an input device;  
determining the frame nearest the first position based upon the directional command; and

selecting the nearest frame as the proximate frame.

15 2. The method according to claim 1 wherein the input device is a directional keypad.

3. The method according to claim 1 wherein the input device is a remote control.

4. The method according to claim 4 wherein the remote control includes directional keys for user selection of a direction.

5. The method according to claim 1 wherein the method occurs in a cable television environment and wherein the method is performed on a server remote from a  
20 cable television set-top box.

6. The method according to claim 1 wherein the step of determining the nearest frame is performed iteratively.

7. The method according to claim 1, further comprising:  
25 determining location boundaries for each frame relative to the web browser window.

- 5     8.     The method according to claim 1, wherein an active link is located at the first position.
9.     The method according to claim 8, wherein the active link is within one of a plurality of frames.
10.    The method according to claim 1, further comprising determining the position of  
10     all links within the proximate frame.
11.    The method according to claim 10, further comprising:  
         determining all navigable links within the proximate frame.
12.    The method according to claim 11, further comprising:  
         determining a navigable link which is closest to the first position based  
15     upon the directional command.
13.    The method according to claim 12, further comprising: setting the closest navigable link as the active link.
14.    The method according to claim 1, wherein the directional command is limited to one of : left, right, up or down.
- 20     15.    The method according to claim 14, wherein if left or right direction is selected, iteratively searching to see if there is a link within a predetermined vertical increment in the direction of the directional command.
16.    The method according to claim 1 wherein the first position is within a current frame, the method further comprising:  
25           enumerating all links within the proximate frame;  
             based upon the directional command, iteratively determining if a navigable link is within the proximate frame;

5                   determining which navigable link is closest to the first position; and  
                  selecting the closest link as the active link.

17.     A method for navigating between frames of a web page of a web document without using a movement translating pointing device, wherein a first position relative to a web browser window within a first frame is known, the method comprising:

10           determining a frame position relative to the web browser window for each frame;  
          receiving a directional command signal;  
          determining for each frame a distance between the frame position and the first position; and

          selecting the frame having the shortest distance from the first position based upon  
15 the directional command signal.

18.     The method according to claim 17 wherein the non-movement translating pointing device is a directional keypad.

19.     The method according to claim 17 wherein the non-movement translating pointing device is a remote control.

20     20.     The method according to claim 19 wherein the remote control includes directional keys for user selection of a direction.

21.     The method according to claim 17 wherein the method occurs in a cable television environment and wherein the method is performed on a server remote from a cable television set-top box.

25     22.     The method according to claim 17, wherein an active link is located at the first position.

23.     The method according to claim 17, further comprising determining the position of all links within the frame having the shortest distance based upon the directional command signal.

30     24.     The method according to claim 23, further comprising:

5           determining all navigable links within the frame having the shortest distance.

25.    The method according to claim 24, further comprising:

          determining a navigable link which is closest to the first position based upon the directional command signal.

26.    The method according to claim 25, further comprising: setting the closest

10   navigable link as the active link.

27.    The method according to claim 17, wherein a directional command associated with the directional command signal is limited to one of : left, right, up or down.

28.    The method according to claim 27, wherein if left or right direction is selected, iteratively searching to see if there is a link within a predetermined vertical increment in  
15   the direction of the directional command signal within the frame having the shortest distance from the first position.

29.    A method for navigating between a first frame and a second frame of a displayed web page of a web document in a web browser window without using a movement translating pointing device, wherein the first frame is active, the method comprising:

20       receiving a command to move from the first frame to the second frame;  
         determining a position relative to the web browser window for the second frame;  
         and  
         selecting the second frame based on the determined position making the second frame active.

25   30.   The method according to claim 1, wherein the web page is altered to indicate that the proximate frame is an active frame.

31.    The method according to claim 13, wherein the web page is altered to visually indicate the active link.

5 32. A computer program product having computer code thereon for operation of a computer for selecting a proximate frame on a web page having a plurality of frames knowing a first position within a frame, each frame having a location relative to a web browser window, the computer program product comprising:

computer code for determining the location within the web browser window of

10 each frame;

computer code for receiving a directional command from an input device;

computer code for determining the frame nearest the first position based upon the directional command; and

computer code for selecting the nearest frame as the proximate frame.

15 33. The computer program product according to claim 32, wherein the computer code for determining the nearest frame is performed iteratively.

34. The computer program product according to claim 32, further comprising:

computer code for determining location boundaries for each frame relative to the web browser.

20 35. The computer program product according to claim 32, wherein an active link is located at the first position.

36. The computer program product according to claim 32, further comprising:

computer code for determining the position of all links within the proximate frame.

25 37. The computer program product according to claim 36, further comprising:

computer code for determining all navigable links within the proximate frame.

5     38.     The computer program product according to claim 37, further comprising:  
                    computer code for determining a navigable link which is closest to the first  
position based upon the directional command.

39.     The computer program product according to claim 38, further comprising:  
                    computer code for setting the closest navigable link as the active link.

10    40. The computer program product according to claim 32, wherein the directional  
                    command is limited to one of : left, right, up or down.

41. The computer program product according to claim 40, further comprising:  
                    computer code for iteratively searching to see if there is a link within a  
predetermined vertical increment in the selected direction from the first position within  
15 the proximate frame if left or right direction is selected.

42. The computer program product according to claim 32 wherein the first position is  
within a current frame, the method further comprising:

                    computer code for enumerating all links within the proximate frame;

                    computer code for iteratively determining if a navigable link is within the  
20 proximate frame based upon the directional command;

                    computer code for determining which navigable link is closest to the first  
position; and

                    computer code for selecting the closest link as the active link.

43     A computer program product having computer code thereon for operation of a  
25 computer for navigating between frames of a web page without using a movement  
translating pointing device, wherein a first position relative to the web browser window  
within a first frame is known, the method comprising:

5 computer code for determining a frame position relative to the web browser window for each frame;  
computer code for receiving a directional command signal;  
computer code for determining for each frame a distance between the frame position and the first position; and  
10 computer code for selecting the frame having the shortest distance from the first position based upon the directional command signal.

44. The computer program product according to claim 43 wherein the computer code is executed on a server remote from a cable television set-top box.

15 45. The computer program product according to claim 43, further comprising:  
computer code for determining the position of all links within the frame having the shortest distance from the first position based upon the directional command signal.

46. The computer program product according to claim 43, further comprising:  
computer code for determining all navigable links within the frame having the  
20 shortest distance.

47. The computer program product according to claim 46, further comprising:  
computer code for determining a navigable link which is closest to the first position based upon the directional command signal.

48. The computer program product according to claim 47, further comprising:  
25 computer code for setting the closest navigable link as the active link.

49. A computer program product having computer code thereon for operation of a computer for navigating between a first frame and a second frame of a web page without using a movement translating pointing device, wherein the first frame is active, the computer program product comprising:

5 computer code for receiving a command to move from the first frame to the second frame;  
computer code for determining a position relative to a web browser window for the second frame; and  
computer code for selecting the second frame based on the determined position  
10 making the second frame active.

50. The computer program product according to claim 32, further comprising: computer code for altering the web page when displayed to indicate that the proximate frame is an active frame.

51. The computer program product according to claim 42, further comprising: computer  
15 code for altering the web page when displayed to visually indicate the active link.

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